Chapter 1 <u>   System</u>

1.1 Specifications

	APC-3597B	APC-3797B	APC-3997B
System			
CPU	Intel® Atom Processor D2550 (1M Cache, 1.8 GHz) Intel® Atom Processor N2600 (1M Cache, 1.6 GHz) option		
System Chipset	Intel NM10 Express		
System Memory	Onboard 2GB DDR3 800 MHz		
IO Port			
USB	1 x M12 8 pin for USB 1/2 1 x M12 8 pin for USB 3/4		
Serial/Parallel	1 x M12 8pin for COM 1/RS-232/422/485 (Default RS-232) 1 x M12 8pin for COM 2/RS-232		
Audio	None		
Graph	None		
LAN	1 x M12 8pin for LAN 1		
Digital I/O	None		
KB/MS	None		
Membrane control	None		
Power	1 x M12 3 pin DC power connector		
Storage Space			
HDD	1 x 2.5" HDD space		
Movable device	1 x Internal SD slot		
Expansion			
On board expansion bus	1 x Mini PCIe half size		
Expansion slot	None		
Display			
Display Type	15" Color TFT LCD	17" Color TFT LCD	19" Color TFT LCD
Max. Resolution	1024x768	1280x1024	1280x1024
Max. Color	262K	16.7M	16.7M
Luminance (cd/m²)	400	350	350
View angle(H°/V°)	160/145	170/170	170/160

Contrast Ratio	800:1	1000:1	1000:1
Backlight lifetime(hrs)	50000	50000	50000

Touch screen

Type	Resistive Type		
Interface	RS-232		
Light Transmission(%)	80%		

Power

Power Input	11~32V DC

Mechanical

Construction	Stainless steel		
IP Rating	Total IP65		
Mounting	VESA 75 x 75		
Dimension (mm)	399 x 324 x 52.5	432 x 358 x 57	470 x 388.6 x 60
Net Weight (Kgs)	6.9	9.8	11.2

Environmental

Operating temperature(°C)	0℃ to 50℃ (with HDD) -20~60 (with Industrial storage)
Storage temperature(°C)	-20~60℃
Storage humidity	10 to 90% @ 40°C, non- condensing
Certification	CE / FCC Class A
Operating System Support	Microsoft Windows 7 pro for embedded, Windows embedded standard 7

Note 1: It is covered by one or more of the following patents: US6, 570, 884, US6,115,776, and US6,327,625.
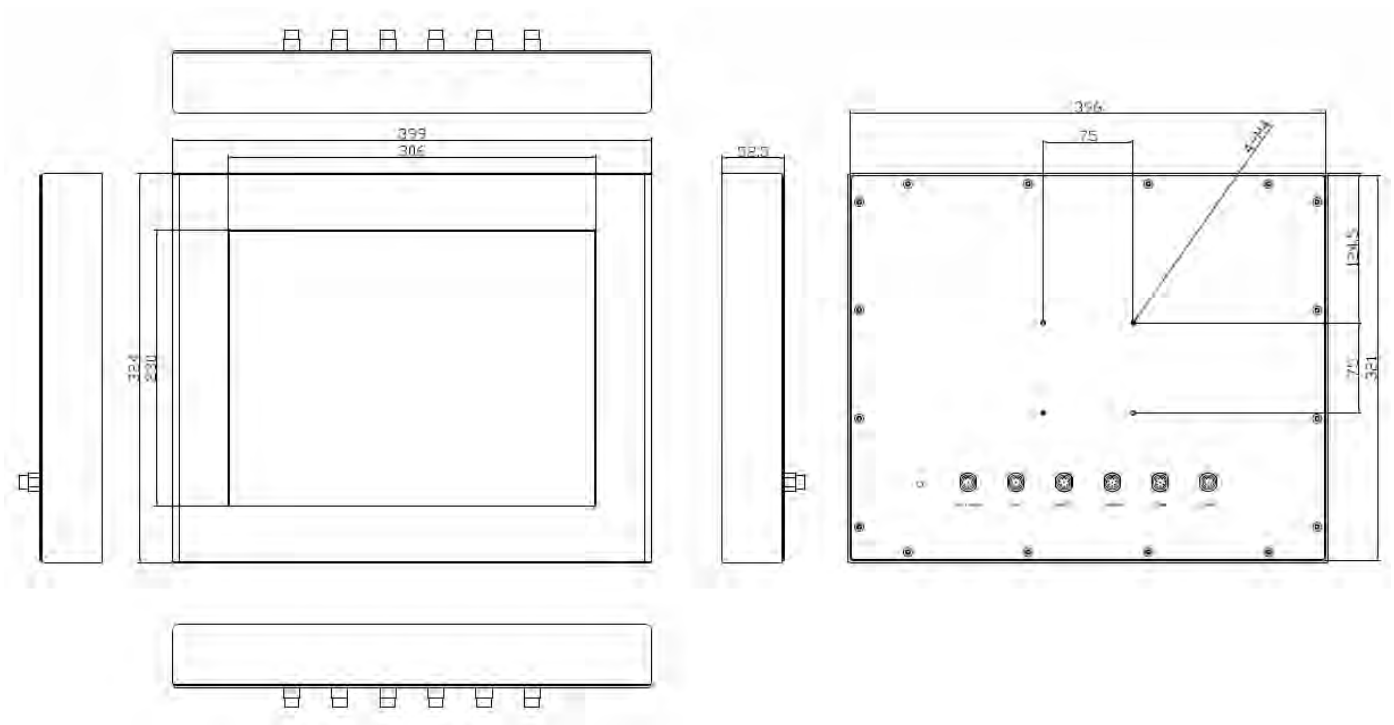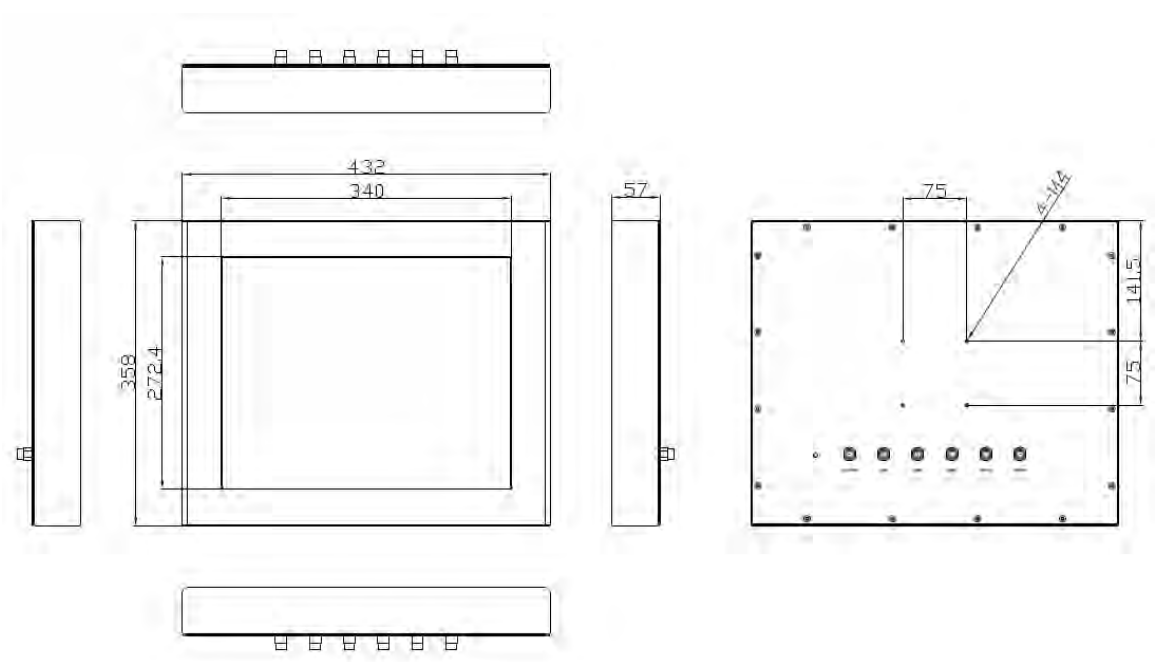
1.2 Dimensions

Figure 1.2: Dimensions of APC-3597B

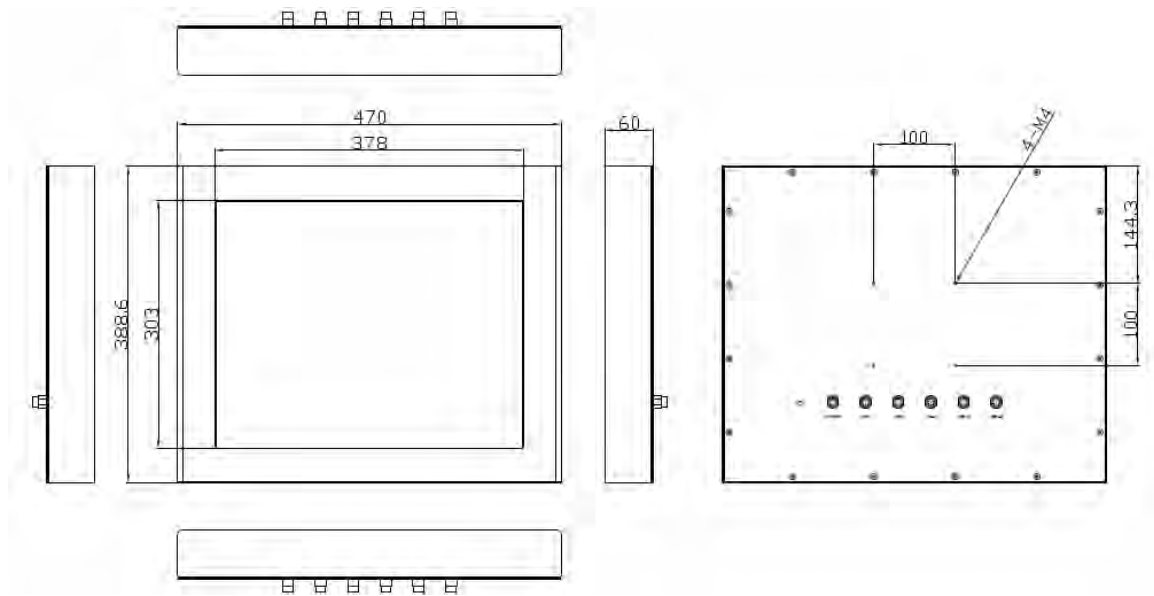**Figure 1.3: Dimensions of APC-3797B**

Figure 1.4: Dimensions of APC-3997B

1.3 Brief Description of APC-3x97B

APC-3X97B series comes with IP65 certificated and is powered by Intel Atom D2550 to provide low power consumption. The stainless steel chassis design makes it exceptionally suitable for strict hygiene regulations for food/chemical industry, medical, restaurant/kitchen applications, storage management and outdoor /information segment and so on.   APC-3X97B series has LCD size in 15", 17" and 19" for selections.   The APC-3X97B series has advanced computing performance and lower power consumption thanks to well-equipped Intel Atom D2550 solution with 2G DDR3 on board.   APC-3X97B supports 5 wires resistive touch.   However, GFG type and capacitive touch screen are available for orders as well.   Regarding the storage capability, APC-3X97B series provides 1 x 2.5" SATA HDD, 1 x internal SD Slot and 1x internal mini-PCIe allowing customers to easily access/backup the data.   APC-3X97B series supports OS such as Windows Embedded Standard 7, Windows 7 Pro for Embedded and so on.

Figure 1.5: Front View of APC-3x97B

Figure 1.6: Rear View of APC-3x97B

Chapter 2   Hardware

2.1 Mainboard

Specifications	
Board Size	170mm x 113mm
CPU Support	Intel® Atom Processor D2550 (1M Cache, 1.8 GHz) Intel® Atom Processor N2600 (1M Cache, 1.6 GHz) option
Chipset	Intel NM10 Express
Memory Support	Onboard 2GB DDRIII SDRAM
Graphics	Integrated Intel GMA 3600 (N2600)
Display Mode	1 x CRT Port 1 x LVDS1 (18/24-bit single LVDS)
Support Resolution	Up to 1920 x1200 for CRT Up to 1366 x768 for LVDS1 (N2600)
Dual Display	CRT+LVDS1
Super I/O	Winbond W83627UHG-E
BIOS	AMIBIOS
Storage	1 x SATA Connector (7P) 1 x SATA Connector (7P+15P) 1 x SD Socket (USB to SD)
Ethernet	2 x PCIe GbE LAN by Realtek RTL8111E
USB	2 x USB 2.0 (type A)stack ports (USB4/USB5) 2 x USB 2.0 Pin header via CN3 (USB2/USB3) 2 x USB 2.0 Pin header via CN1 (USB0/USB1) 1 x USB 2.0 for MPCIE1 (USB7) Mini-PCIe(USB7)

Serial	1 x RS-232/RS-422/RS-485, DB9 connector for external (COM1)
	      pin 9 w/5V/12V/Ring select
	 1 x RS232 port, DB9 connector for external (COM2)
	      pin 9 w/5V/12V/Ring select
	 1 x RS422/485 header via CN2 (COM3)
	 2 x UART via CN3 (COM5,COM6)

Digital I/O	8-bit digital I/O Pin header via CN2
	    4-bit digital Input
	    4-bit digital Output
	4-bit digital I/O Pin header via CN3
	    2-bit digital Input
	    2-bit digital Output

Battery	Support CR2477 Li battery by 2-pin header
Audio	Realtek ALC662 HD audio codec Line-in, Line-out, MIC via 2x6-pin header Audio Line out in phone jack
Keyboard /Mouse	1 x PS2 keyboard/mouse 1x6 box pin header via CN3
Expansion Bus	1 x mini-PCI-express slot 1 x PCI-express via CN3
Touch Ctrl	1 x Touch control header for TCH1 (COM4)
Power Management	Wide Range DC 9~36V input 1 x 3-pin power input connector
Switches and LED Indicators	1 x Power on/off switch via CN1 1 x Reset switch via CN1 1 x Power LED status via CN1 1 x HDD LED status via CN1 1 x Buzzer
External I/O port	2 x COM Ports (COM1/COM2) 2 x USB 2.0 Ports (USB4/USB5) 2 x GbE LAN Ports 1 x Line out Audio phone jack
Watchdog Timer	Software programmable 1 – 255 second by Super I/O
Temperature	Operating: -20℃ to 70℃ Storage: -40℃ to 85℃
Humidity	5% - 95%, non-condensing, operating
Power Consumption	12V /0.95A (Intel Atom N2600 processor with 2GB DDR3 DRAM)
EMI/EMS	Meet CE/FCC class A